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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,737	05/09/2002	Jimmy Hsu	8727-US-PA	6244

31561 7590 02/23/2005

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE  
7 FLOOR-1, NO. 100  
ROOSEVELT ROAD, SECTION 2  
TAIPEI, 100  
TAIWAN

EXAMINER

BOWERS, BRANDON

ART UNIT PAPER NUMBER

2825

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/063,737

Applicant(s)

HSU, JIMMY

Examiner

Brandon W. Bowers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-22 and 27-33 is/are pending in the application.
- 4a) Of the above claim(s) 27-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**FINAL ACTION**

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 16-22, drawn to a multi-layered substrate, classified in class 716, subclass 12.
- II. Claims 27-33, drawn to a multi-layered , classified in class 716, subclass 14.

The inventions are distinct, each from the other because of the following reasons:

Newly submitted claims 27-33 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Inventions Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group I has separate utility such as providing a voltage reference signal trace that is wider than the other signal traces and invention Group II has separate utility such as providing a voltage reference signal trace that has a constant voltage input. See MPEP § 806.05(d).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 27-33 are withdrawn from consideration

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as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al, US Patent No. 5,990,547 in view of Brooks et al., US Patent No. 6,326,244.

In reference to claim 16, Sharma teaches a multi-layered substrate having a voltage reference signal circuit layout therein (Figure 1 and column 3 line 53 – column 4 line 19) comprising at least one signal layer having a plurality of signal traces (column 3, lines 54-55), a non-signaling layer having a voltage reference signal trace (column 3, lines 55-56), and a conductive plane between the signal layer and the non-signal layer (column 3, lines 1-13). Sharma does not teach wherein the voltage reference signal trace is wider than the other signal traces. Brooks teaches wherein voltage reference signal trace is wider than the other signal traces (column 8, lines 52-67). Accordingly, it would have been obvious for one skilled in the art at the time of invention to incorporate the teachings of Sharma and Brooks to make a multi-layered substrate having all the limitations of claim 16 because it would reduce the self inductance associated with

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closely-adjacent, elongated traces by reducing the magnetic flux caused by oppositely directed currents flowing in the traces and the voltage reference signal trace.

In reference to claim 17, Sharma teaches wherein the non-signaling layer includes at least one power plane (column 3, lines 53-57).

In reference to claim 18, Sharma teaches wherein the non-signaling layer includes at least one ground layer plane (column 3, lines 53-57).

In reference to claim 19, Sharma teaches wherein the non-signaling layer includes at least one power plane and a plurality of signal traces (column 3, lines 57-column 4, line 19).

In reference to claim 20, Sharma teaches wherein the non-signaling layer includes at least one ground layer plane and a plurality of signal traces (column 3, lines 57-column 4, line 19).

In reference to claim 21, Sharma teaches wherein the conductive plane includes a ground plane (column 3, lines 1-13 and 55-57).

In reference to claim 22, Sharma teaches wherein the conductive plane includes a power plane (column 3, lines 1-13 and 55-57).

### ***Response to Arguments***

Applicant's arguments, see Remarks, filed 21 December 2004, with respect to the Honsinger/Brooks rejection have been fully considered and are persuasive. The Honsinger/Brooks rejection of claims 16-22 has been withdrawn.

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Applicant's arguments regarding the Sharma/Brooks rejection have been fully considered but they are not persuasive. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

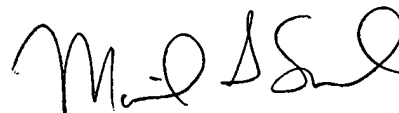
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon W. Bowers whose telephone number is (571)272-1888. The examiner can normally be reached on 8:30 am until 5:00 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (571)272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BWB



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